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**ANNUAL
MONITORING
REPORT**

2/28/2009

**MWH**

BUILDING A BETTER WORLD

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February 28, 2009

Mr. Glenn von Gonten
New Mexico Oil Conservation Division (NMOCD)
1220 South St., Francis Drive
Santa Fe, New Mexico 87505

**RE: El Paso Tennessee Pipeline Company Pit Groundwater Remediation Sites
2008 Annual Reports**

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Tennessee Pipeline Company (EPTPC), is submitting the enclosed 2008 Annual Reports for each of EPTPC's 21 remaining San Juan River Basin pit groundwater remediation Sites. The reports present the 2008 sampling and product recovery data and include recommendations for 2009 activities at these Sites.

The 2008 Annual Reports are divided into three volumes based on location type. The volumes are as follows:

<u>Volume</u>	<u>Location Type</u>
1	Federal Land
2	Non-Federal Land (Excl. Navajo Nation)
3	Navajo Nation

If you have any questions concerning the enclosed reports, please call either Doug Stavinoha of EPTPC (713-420-5150) or me (303-291-2276).

Sincerely,

Jed Smith
Project Manager

encl.

cc: Bill Freeman – NNEPA, Shiprock, NM (Volume 3 Only)
Bill Liese – BLM, Farmington, NM (Volume 1 Only)
Brandon Powell – NMOCD, Aztec, NM (Volumes 1, 2, and 3)
Doug Stavinoha – EPTPC (Volumes 1, 2, and 3)

**2008 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I
EL PASO TENNESSEE PIPELINE COMPANY**

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
87640	3RP-155-0	Canada Mesa #2	24N	06W	24	I
89961	3RP-170-0	Fields A#7A	32N	11W	34	E
73220	3RP-068-0	Fogelson 4-1 Com. #14	29N	11W	4	P
89894	3RP-186-0	Hammond #41A	27N	08W	25	O
97213	3RP-190-0	Hamner #9	29N	09W	20	A
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	P
70194	3RP-201-0	Johnston Fed #4	31N	09W	33	H
89232	3RP-202-0	Johnston Fed #6A	31N	09W	35	F
LD072	3RP-204-0	K27 LD072	25N	06W	4	E
LD174	3RP-212-0	LAT L 40	28N	04W	13	H
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	12	O
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	C



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**2008 ANNUAL GROUNDWATER REPORT
NON-FEDERAL SITES VOLUME II
EL PASO TENNESSEE PIPELINE COMPANY**

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
03906	3RP-179-0	GCU Com A #142E	29N	12W	25	G
93388	3RP-192-0	Horton #1E	31N	09W	28	H
LD087	3RP-205-0	K-31 Line Drip	25N	06W	16	N
72556	3RP-207-0	Knight #1	30N	13W	5	A
94967	3RP-214-0	*Lindrith B #24	24N	03W	9	N
70445	3RP-074-0	Standard Oil Com #1	29N	09W	36	N
71669	3RP-239-0	State Gas Com N #1	31N	12W	16	H

* Lindrith B#24 Site was submitted for closure in 2006, and is pending approval from NMOCD.
There were no activities for this site in 2008.



**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Fogelson 4-1 Com #14
Meter Code: 73220**

SITE DETAILS

Legal Description:	Town: 29N	Range: 11W	Sec: 4	Unit: P
NMOCD Haz Ranking: 10	Land Type:	Federal	Operator:	Burlington Resources

PREVIOUS ACTIVITIES

Site Assessment:	3/94	Excavation:	4/94 (65cy)	Soil Boring:	10/95
Monitor Well:	10/95	Geoprobe:	12/96	Additional MWs:	6/00
Downgradient MWs:	6/00	Replace MW:	NA	Quarterly Initiated:	12/96
ORC Nutrient Injection:	8/01	Re-Excavation:	NA	PSH Removal Initiated:	NA
Annual Initiated:	6/98	Quarterly Resumed:	NA	PSH Removal in 2008?	Yes

SUMMARY OF 2008 ACTIVITIES

MW-1: Free-product recovery and water level monitoring were performed during 2008. A product absorbing sock was placed in the well in January 2008, and recovery activities were performed during August and November 2008.

MW-2: Annual water level monitoring (November) was performed during 2008.

MW-3: Annual water level monitoring (November) was performed during 2008.

Site-Wide Activities: No other activities were performed at this Site during 2008.

SITE MAPS

A Site map (November) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically on Figures 2 through 4. Where applicable, static water level elevations were corrected for measurable thicknesses of free-product (specific gravity of 0.8).
- Historic free-product recovery data are summarized in Table 2.
- The 2008 field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Fogelson 4-1 Com #14
Meter Code: 73220**

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this Site during 2008.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this Site; however, the attached Site map presents the 2008 product recovery and water level data.

RESULTS

- The groundwater flow direction generally is to the west.
- The presence of free-product in MW-1 led to a decision not to proceed with the annual sample collection in November 2007; and this same decision was made in 2008. Water levels at the Site are approximately 1.5 feet lower than at any other time in the sampling record (which goes back to 1995). It is not atypical to see observable accumulations of free-product as more of the smear zone becomes unsaturated. In 2008, a total of 0.20 gallons of free-product was recovered from MW-1 via product-absorbing socks.
- Long-term decreasing BTEX concentrations at the Site indicate that natural attenuation is occurring. Historically, benzene concentrations in MW-1 have decreased significantly from their level of 1,520 µg/L in 1995, when sampling was initiated. In November 2006, the benzene concentration was 206 µg/L and the total xylenes concentration was 2,460 µg/L. Both results were comparable to those of other recent years and exceeded their respective NMWQCC standards. Concentrations of toluene and ethylbenzene were below standards in 2006.

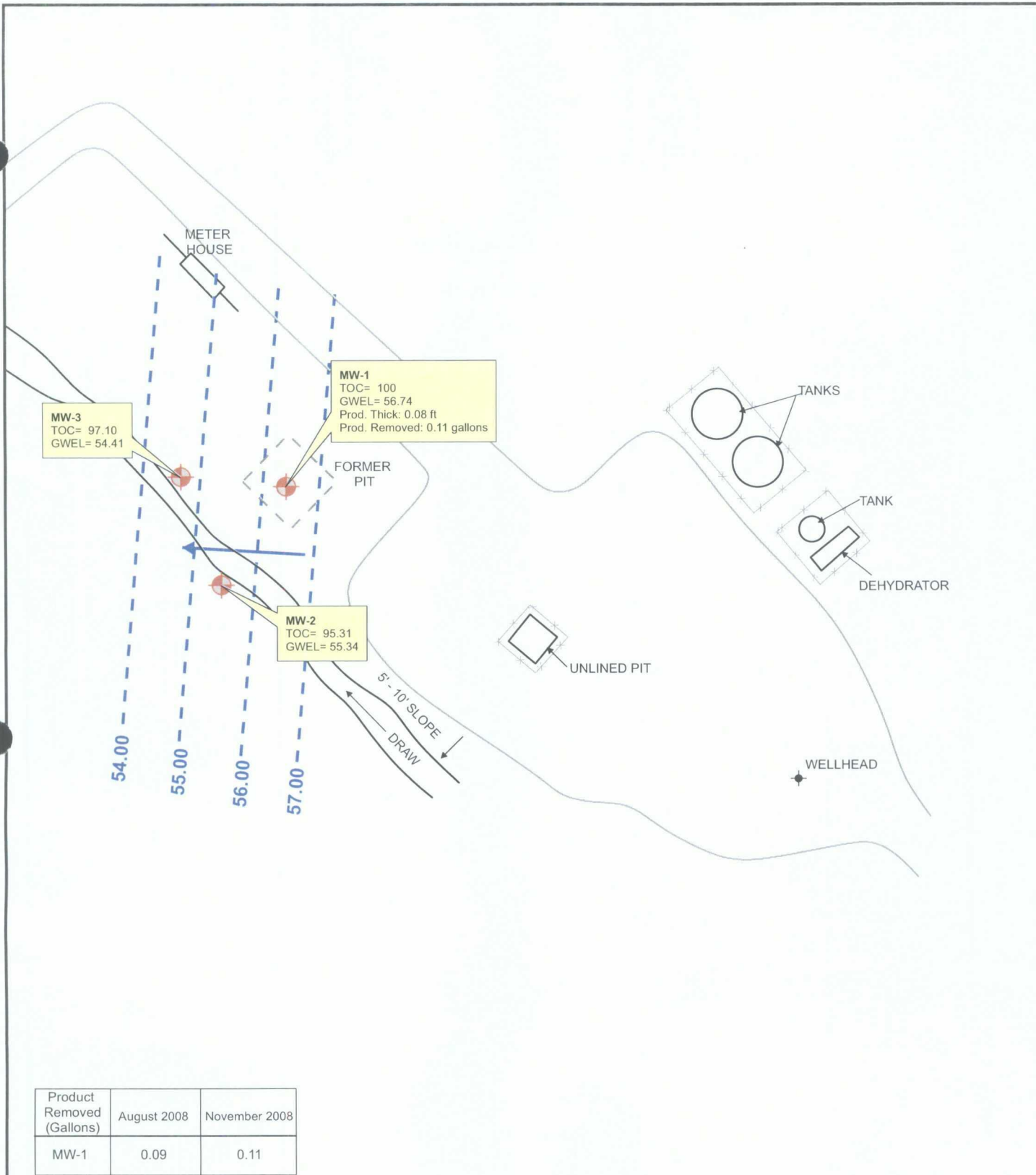
RECOMMENDATIONS

- EPTPC recommends conducting quarterly water level/free-product monitoring for this Site. At this time, EPTPC recommends bailing MW-1 quarterly and installing absorbent socks after each bailing event. These activities should continue until free-product subsides.
- The use of ORC socks in MW-1 to enhance biodegradation of dissolved-phase contaminants may be reinstated once observable free-product in the well has subsided. However, ORC socks are generally not utilized when hydrocarbon product (including residual phase product that cannot seep into a monitoring well) is present, due to the extremely high oxygen demand. EPTPC will evaluate the use of ORC in the future, following the subsidence of free-product.

**EPTPC GROUNDWATER SITES
2008 ANNUAL GROUNDWATER REPORT**

**Fogelson 4-1 Com #14
Meter Code: 73220**

- MW-1 will not be sampled again until the free-product subsides.
- Historically, the BTEX concentrations at downgradient/cross-gradient monitor wells MW-2 and MW-3 have been less than closure criteria. As such, neither of these wells has been sampled since 2003. Because of the observed free-product in MW-1 and interim cessation of MW-1 groundwater sampling, EPTPC recommends that MW-2 and MW-3 be gauged quarterly and sampled annually.



LEGEND

- MW-4** Existing Monitoring / Observation Well
- PZ-01** Abandoned Monitoring Well
- Groundwater Flow Direction
- Potentiometric Surface Contour (Inferred Where Dashed)

- B** Benzene (ug/L)
- T** Toluene (ug/L)
- E** Ethylbenzene (ug/L)
- X** Total Xylenes (ug/L)
- TOC** Top of Casing (ft. AMSL)
- GWEL** Groundwater Elevation (ft. *)
- * = Elevations in feet relative to a 100 ft benchmark.



Not To Scale



MWH



PROJECT:

FOGELSON 4-1 COM. #14

TITLE:

Groundwater Potentiometric Surface Map
November 7, 2008

FIGURE:

1

FIGURE 2
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
FOGELSON 4-1 COM. #14 (METER #73220)
MW01

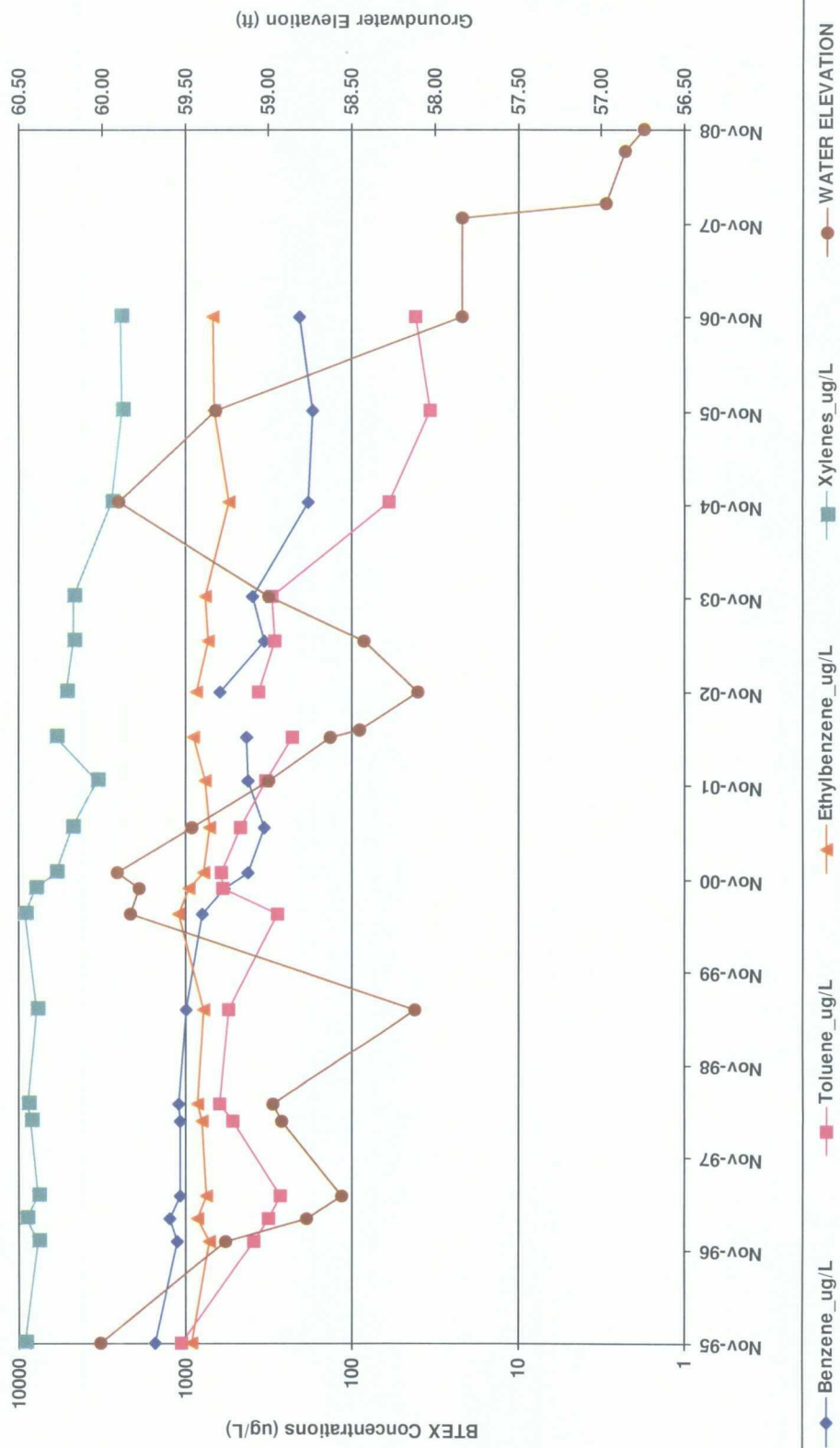


FIGURE 3
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
FOGELSON 4-1 COM. #14 (METER #73220)
MW02

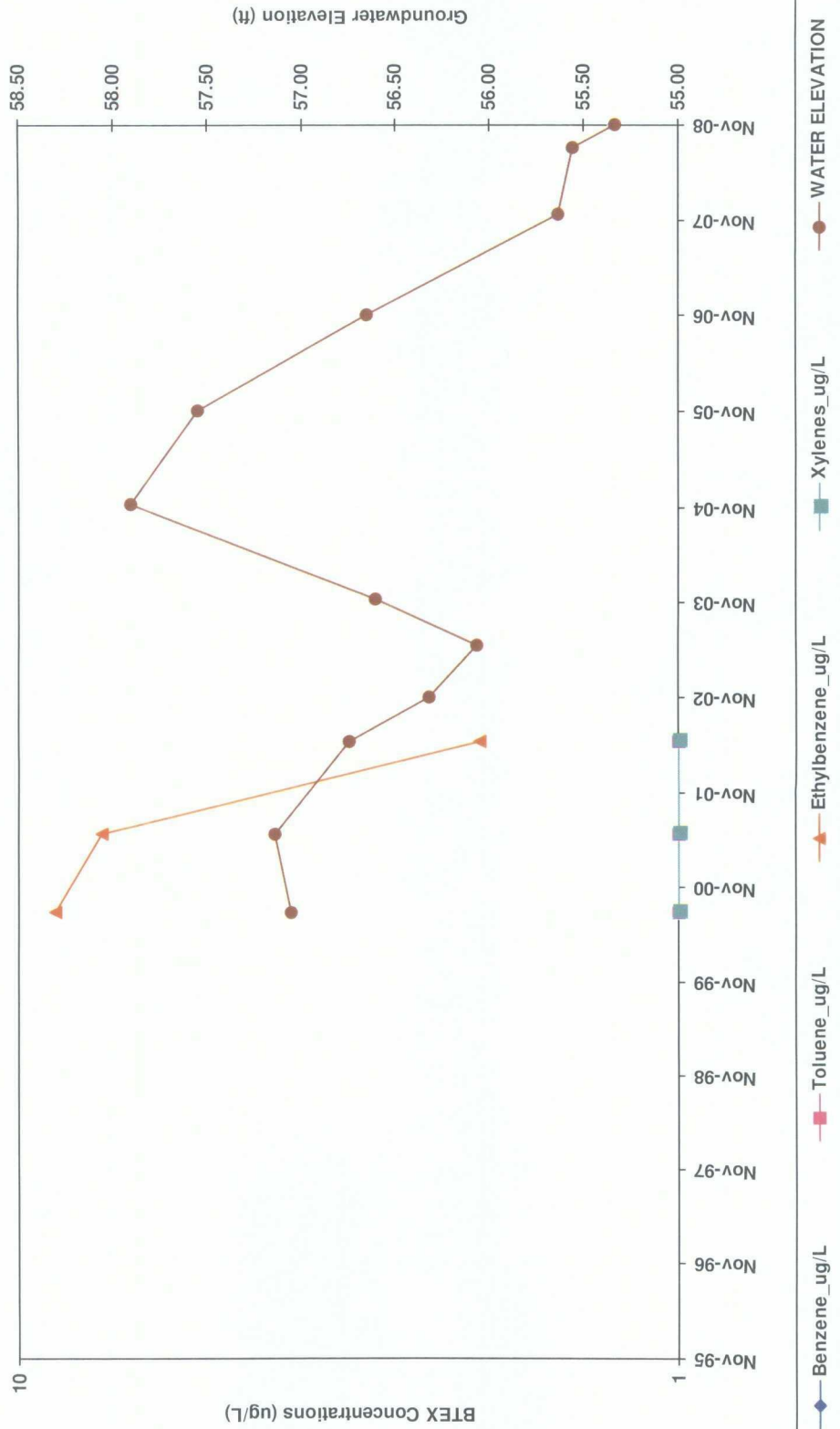


FIGURE 4
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
FOGELSON 4-1 COM. #14 (METER #73220)
MW03

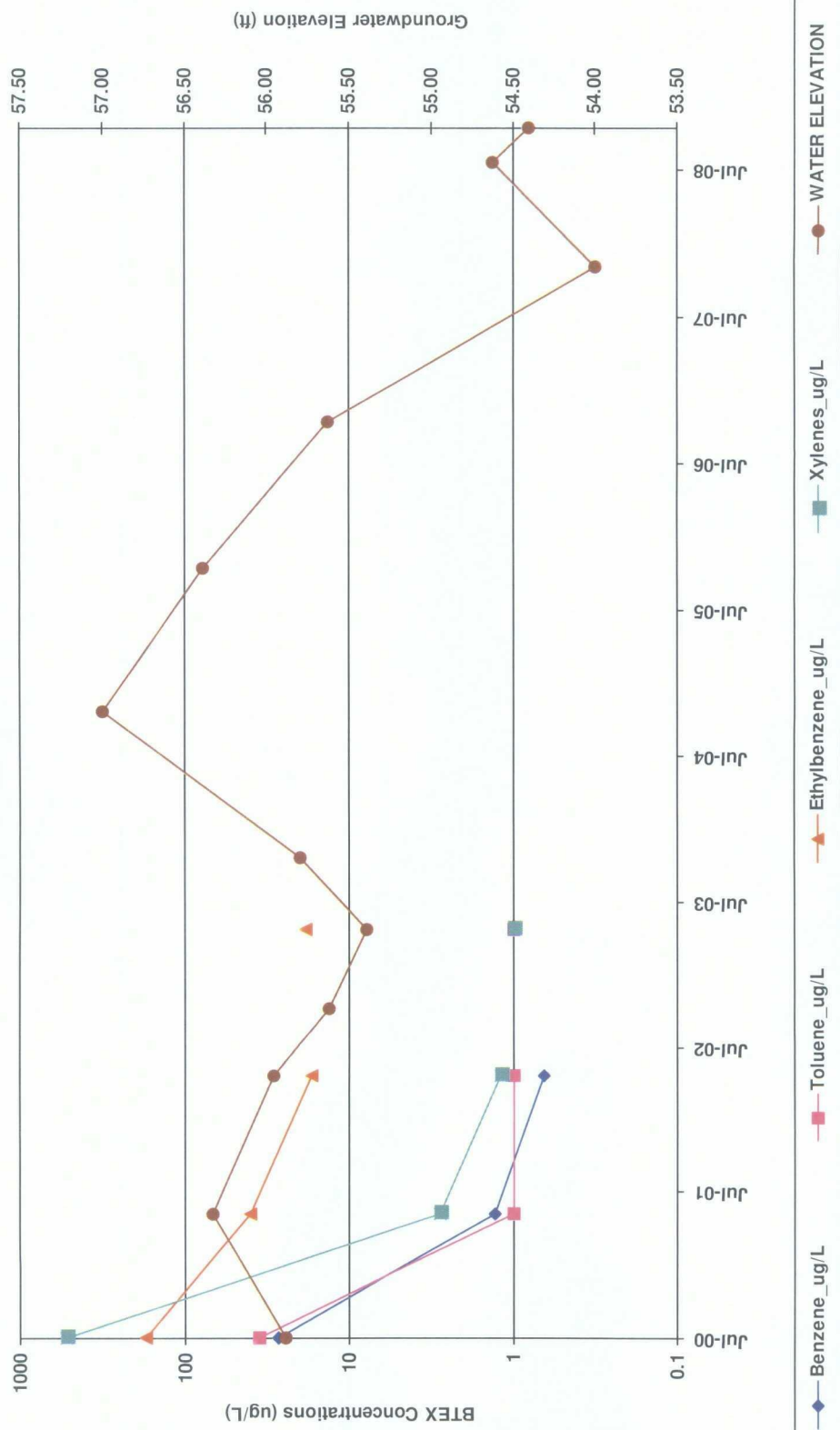


TABLE 1

**SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
FOGELSON 4-1 COM. #14 (METER #73220)**

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	11/6/1995	1520	1050	907	9180	39.99
	12/6/1996	1110	388	713	7730	40.74
	3/10/1997	1240	318	850	9050	41.23
	6/6/1997	1080	268	747	7700	41.44
	3/30/1998	1070	522	789	8430	41.08
	6/4/1998	1090	627	837	8880	41.02
	6/15/1999	1000	550	770	7800	41.88
	6/19/2000	790	280	1100	9300	40.17
	10/2/2000	580	600	950	8000	40.22
	12/5/2000	420	610	770	6000	40.09
	5/30/2001	340	470	710	4800	40.54
	11/26/2001	420	330	760	3400	41.00
	5/15/2002	430	230	900	6000	41.37
	11/4/2002	625	370	862	5210	41.90
	5/21/2003	339	296	723	4730	41.57
	11/15/2003	401	308	755	4700	41.00
	11/16/2004	185	59.9	550	2800	40.10
	11/8/2005	174	34.3	675	2440	40.68
	11/8/2006	206	41.6	694	2460	42.16
MW02	7/27/2000	1	1	8.8	1	38.25
	5/30/2001	1	1	7.5	1	38.17
	5/15/2002	1	1	2	1	38.56
MW03	7/27/2000	27	35	170	520	41.21
	5/30/2001	1.3	1	40	2.8	40.77
	5/15/2002	0.64	1	17	1.2	41.14
	5/21/2003	1	1	18.2	1	41.71

Note: Non Detects are represented by a value of 1.

TABLE 2

SUMMARY OF FREE-PRODUCT REMOVAL
FOGELSON 4-1 COM. #14 (METER #73220)

Monitoring Well	Removal Date	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Volume of Product Removed (gallons)
MW01	1/25/2008	43.00	43.10	0.10	0.00	0.00
	8/12/2008		43.14	0.00	0.09	0.09
	11/7/2008	43.24	43.32	0.08	0.11	0.20